EDITORIAL STAFF

PUBLISHER F. J. Van Antwerpen

> EDITOR Larry Resen

Managing Editor G. Heath Walsh

Technical Editor Harold I. Abramson

Art Editor Louis H. Dufault

Art Assistant Florence Keller

Elizabeth A. Clarke Joyce M. Barisano

BUSINESS STAFF

Advertising Sales Manager W. Chenoweth

Asst. to Adv. Sales Mgr. E. M. Hyers

Production Manager F. Grisoli

Asst. to Prod. Mgr. A. Mesa

District Managers Harry B. Dill

James C. Galloway Donald R. Grice

Richard E. Hoierman Clark Presbrey

> George Reilly Fred W. Smith

Joseph Stringer

CIRCULATION

E. T. Plattner, Mgr. L. Hampton

CEP INDEX **VOL. 61** 1965

Published by

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS New York, N. Y. 10017

345 East 47th Street

A.I.CH.E. OFFICERS AND DIRECTORS, 1965 Officers elected for year 1965



President B. Franklin



Vice-President S. W. Churchill



Treasurer G. E. Holbrook



F. J. Van Antwerpen

Directors

*W. M. Carlson *L. J. Coulthurst

J. R. Fair °B. B. Kuist R. L. Pigford E. M. Schoenborn H. D. Guthrie W. W. Kraft *Term expires December 31, 1965

A. Smith, III M. Souders A. S. West

Directors elected to serve through December 31, 1967





Guthrie



Pigford



OFFICERS AND DIRECTORS ELECTED 1965 FOR YEAR 1966

President Votes Treasurer G. E. Holbrook 9,795 S. W. Churchill 5,328 L. Conn W. Ellis W. Vice-President E. B. Christiansen5,650 F. J. Van Antwerpen .. 9,813 F. C. Croxton

The total 1966 slate, in addition to the newly elected officers and directors listed, included: M. S. Peters, J. W. Axelson, W. A. Burns, C. McKinley, D. M. Himmelblau, H. E. Hoelscher, I. Leibson, and R. D. Sheeline.

SUBJECT INDEX

Annual Index Abbreviation Key

N.—News Item
M.S.—Abstract from CEP Monograph
Series Volume
S.S.—Abstract from CEP Symposium
Series Volume

A

Absorbers, gas, packaged, N Aug. 116-12
ABSORPTION Sept. 86-8 column case history Sept. 86-8 of sulfur dioxide Nov. 89-9 Thesis Index Jan. 97-10 of toxic chemicals Feb. 59-6
of sulfur dioxide
Thesis IndexJan. 97-10
of toxic chemicals
Abstracts, putting information to
work
nightmare
Acetic acid, micropilot plant
performanceJune \$8-93
ACETYLENE
flow phenomena and flame technology
technologyAug. 56-63
mixtures
mixer-burner design
Acid treating, compact packaged
processes
processes
Administration, R&D projects July 36-38
ADSORPTION
in high temperature gas-cooled
nuclear reactor
Thesis Index Jan. 97-102 Aerospace, Chemical Engineering techniques, S.S. Feb. 84-88 Aerospace, zero gravity still for . Sept. 76-81
niques 8.8. Feb 84-88
Aerospace, zero gravity still for . Sept. 76-81
Aircraft industry, chemical tech-
nology, NJune 50
Aircraft industry, chemical tech- nology, N
coats to desdituite tuet oil Dept. 49-26
industry spending on research needs
upping, N
foint effort with government neged in
joint effort with government urged in
joint effort with government urged in air conservation
air conservation
air conservation
air conservation
air conservation
air conservation
air conservation
air conservation
air conservation
air conservation
air conservation
air conservation Nov. 108 reduction by bisulfite mill Nov. 29-93 sources of sulfur dioxide Sept. 59-63 sulfuric acid, sulfur dioxide, USPHS, & MCA Sept. 45 Air Resources, Metropolitan Engineers, N May 12 Alkyl Compounds, aluminum, handling Apr. 105-110 Alkylation, optimizing Nov. 94-98 Aluminum Alkyls, how to handle Apr. 105-110 AMERICAN INSTITUTE OF CHEMICAL ENGINEERS
air conservation Nov. 108 reduction by bisulfite mill Nov. 29-93 sources of sulfur dioxide Sept. 59-63 sulfuric acid, sulfur dioxide Sept. 59-63 sulfuric acid, sulfur dioxide, USPHS, & MCA Sept. 45 Air Resources, Metropolitan Engineers, N May 12 Alkyl Compounds, aluminum, handling Apr. 105-110 Alkylation, optimizing Nov. 94-98 Aluminum Alkyls, how to handle Apr. 105-110 AMERICAN INSTITUTE OF CHEMICAL ENGINEERS The A.I.Ch.E. and You, booklet
air conservation
air conservation Nov. 108 reduction by bisulfite mill Nov. 39-93 sources of sulfur dioxide Sept. 59-63 sulfuric acid, sulfur dioxide, Sept. 45 Air Resources, Metropolitan Engineers, N May 12 Alkyl Compounds, aluminum, handling Nov. 94-98 Alkyl Compounds, aluminum, handling Nov. 94-98 Aluminum Alkyls, Nov. 94-98 Aluminum Alkyls, Apr. 105-110 AMERICAN INSTITUTE OF CHEMICAL ENGINEERS The A.I.Ch.E. and You, booklet prepared by the Midland Section Oct. 114-116 AUGO-Section Oct. 114-116 AUGO-Section Oct. 129 Founders, 1965 Dec. 103 Fritz Medal Dec. 103 Professional Progress Oct. 129 Professional Progress Oct. 129 Warren K. Lewis Nov. 123
air conservation Nov. 108 reduction by bisulfite mill Nov. 39-93 sources of sulfur dioxide Sept. 59-63 sulfuric acid, sulfur dioxide, Sept. 45 Air Resources, Metropolitan Engineers, N May 12 Alkyl Compounds, aluminum, handling Nov. 94-98 Alkyl Compounds, aluminum, handling Nov. 94-98 Aluminum Alkyls, Nov. 94-98 Aluminum Alkyls, Apr. 105-110 AMERICAN INSTITUTE OF CHEMICAL ENGINEERS The A.I.Ch.E. and You, booklet prepared by the Midland Section Oct. 114-116 AUGO-Section Oct. 114-116 AUGO-Section Oct. 129 Founders, 1965 Dec. 103 Fritz Medal Dec. 103 Professional Progress Oct. 129 Professional Progress Oct. 129 Warren K. Lewis Nov. 123
air conservation Nov. 108 reduction by bisulfite mill Nov. 39-93 sources of sulfur dioxide Sept. 59-63 sulfuric acid, sulfur dioxide, Sept. 45 Air Resources, Metropolitan Engineers, N May 12 Alkyl Compounds, aluminum, handling Nov. 94-98 Alkyl Compounds, aluminum, handling Nov. 94-98 Aluminum Alkyls, Nov. 94-98 Aluminum Alkyls, Apr. 105-110 AMERICAN INSTITUTE OF CHEMICAL ENGINEERS The A.I.Ch.E. and You, booklet prepared by the Midland Section Oct. 114-116 AUGO-Section Oct. 114-116 AUGO-Section Oct. 129 Founders, 1965 Dec. 103 Fritz Medal Dec. 103 Professional Progress Oct. 129 Professional Progress Oct. 129 Warren K. Lewis Nov. 123
air conservation Nov. 108 reduction by bisulfite mill Nov. 39-93 sources of sulfur dioxide Sept. 59-63 sulfuric acid, sulfur dioxide, Sept. 45 Air Resources, Metropolitan Engineers, N May 12 Alkyl Compounds, aluminum, handling Nov. 94-98 Alkyl Compounds, aluminum, handling Nov. 94-98 Aluminum Alkyls, Nov. 94-98 Aluminum Alkyls, Apr. 105-110 AMERICAN INSTITUTE OF CHEMICAL ENGINEERS The A.I.Ch.E. and You, booklet prepared by the Midland Section Oct. 114-116 AUGO-Section Oct. 114-116 AUGO-Section Oct. 129 FOUNDAMENT Oct. 129 FOUNDAMENT Oct. 129 Founders, 1965 Dec. 103 Fritz Medal Dec. 103 Professional Progress Oct. 129 Warren K. Lewis Nov. 123
air conservation

property estimation
Jan. 160-166, Feb. 131-137, Mar. 130-136, Apr. 162-169, May 162-171, June 144-151, July 184-160, Aug. 132-137, Sept. 198-115, Oct. 140-148, Nov. 119-122, Dec. 128 the game's not the same
information storage/retrieval: is it working?
Local Sections Jan. 158-159, Feb. 105-106, Mar. 138-141,
160-161, Apr. 126-131, 135-137, May 132- 139, June 118-132, 127, July 120-125, Aug. 104-110, Sept. 100-103, 128-129, Oct. 114- 119, Nov. 115-118, Dec. 121 Local Section Officers
Local Section Officers
Feb. 106-107, April 136-137, June 120, July 124-125, August 106-110, Sept. 128- 129, Oct. 118-119, Nov. 118
Local Section Officers meeting Feb. 154
Meetings
Boston Jan. 31 Dallas Dec. 95-99 Heat Transfer Conference,
Heat Transfer Conference
Los AngelesJune 114-117
Los AngelesJune 114-117 HoustonJan. 104, 106, Mar. 51
London Jan. 103, Feb. 90, Apr. 112-120, July 39-40, July 47
Minneapolis
July 112-119, Aug. 96-98, Nov. 58-59 Petrochemical and Refining Exposi-
tion, Houston Jan. 104-112, Mar. 41-44
Philadelphia Oct. 107-113, Nov. 106-107
San Francisco Mar. 118-124, Apr. 123-125, June 48-49
Sixth Joint Automatic Control Con-
Membership Committee report May 127
Sixth Joint Automatic Control Con- ference, Troy, N.Y
Jan. 182, Feb. 154, Mar. 184, Apr. 188, May 188, June 172, July 180, Aug. 156, Sept. 184, Oct. 186, Nov. 196, Dec. 152 Nominating Committee,
Nominating Committee,
procedures
People Jan. 154-167, Feb. 108-111, Mar. 125-150,
Jan. 154-167, Feb. 108-111, Mar. 125-150, Apr. 138-141, May 140-143, June 123-127, July 126-131, Aug. 112-115, Sept. 104-107,
Oct. 120-123, Nov. 123-126, Dec. 101 system for estimating physical
system for estimating physical
properties
necessityOct, 101-105
is easy to handleJan. 66-71
improved catalysts reduce
costsJan. 57-61 polyurethane-insulated tanks to
barge transport, N June 50 as a solventJan. 139-144
tank insulation
Ammonium nitrate, urea solutions: Are
they safe?Jan. 72-77

8	Chromatographic, pilot plant June 67-6 nuclear systems, pressurized water
1	reactors
8	on-stream, molten sulfur Sept. 67-6 transient of nuclear power
	reactors
	Anodes, for mercury cells Mar. 94-10
	Atomic Energy, see nuclear Nov. 67-8
	Australia, chemical mudatty
5	AUTOMATION pilot plant
	in pilot plantsJune 79-8
5	processes, pilot plantJune 94-9
	В
	Baffles
	effect on heat exchanger flow,
	geometryJuly 63-7
	performanceJuly 49-5 Batteries, biochemical fuel cellDec. 55-6
	fluidised calcinersJuly 89-96 trickle flow, performanceOct. 77-8:
	trickle flow, performance Oct. 77-8:
	dollars of a job
	Bio-Chemical Engineering, division
	formed by A.I.Ch.E
	Bioengineering
	microorganisms in energy
	production
	is a new era beginning May 60-6: Biosynthesis, of animal protein Oct. 101-10:
	Biguiffice mills gave money by stapping
	air pollution Nov. 89-93 Biuret, content in urea Jan. 62-63 Blending, vinyl, simplified, N . July 134-145
	Biuret, content in ureaJan. 62-61
	Blending, vinyl, simplified, N July 134-145
	Blow molding, polypropylene Aug. \$8-95 Boiling water nuclear reactors, develop-
	ment and design progress Nov. 72-74
	BOOKS RECEIVED
	Jan. 19, Mar. 10, June 14-16, Aug. 40, Sept. 12, Oct. 12-13
	Sept. 12, Oct. 12-13
	Burners, probing for profit in acetylene convertersAug. 49-51
	Business
	failures up in '64, N
	marketing calls the shots Oct. 16-19
	protection for the employer Apr. 33-35
	Butylene optimizing alkylation processes Nov. 94-98
	in polymer gasolines
	the polyment guarantees to the territorial
	C
	Calciners, pilot- and plant-scale fluidized bedJuly 89-96 Capital, economic analysis of R&D
	fluidized bedJuly 89-96
	projects Tuly 106-110
	projectsJuly 106-110 Carbon black, by-product in synthesis
	gas manufacture
	gas manufacture
	computer control to a fluid
	crackingOct. 93-98
	cracking
	Thesis IndexJan. 37-102
	CATALYSTS bydrocracking
	hydrogenation Mar 74-76
	hydrocracking Mar. 59-63 hydrogenation Mar. 74-76 hydrogenation, presulfiding Mar. 64-68
	isomerization

reduce costsJan. 87-61	Chlorination, using electrothermal	centrifugal coalescers Oct. 58-62
Caustic, service, titanium equipment	fluidized bedFeb. 63-67	computer, of pilot plantsJune 79-83 computers, justificationOct. \$8-86
Caustic soda, plant on stream, NNov. 61	service, titanium equipment	design for safety
Cement, king-size kiln, NJan. 30	use	feedforward of distillation columns
CENTRIFUGES advances in extrationMay 69-73	Chromatographs, pilot plant June 67-69	high pressure experimental unit June 70-74
conlescersOct. 58-63	Chromatography, on-line analyses Oct. 87-92	isoprene processJune 57-61
for continuous operation May 83-84 debrining potash and sait May 78-82	Coal	minimum attention operation of pilot plantsJune 84-87
vibrating, high capacity May 85-87	combustion, source of pollution Sept. 59-63	nuclear power reactors Nov. 15-77
CHEMICAL ENGINEERS are you in a fur-lined foxholeOct. 30-32	hydrocarbons from oil shale, oil sands and, S.S	on-line instrumentation Oct. 87-92 process and safety Feb. 44-46
what should they study May 55-59	COALESCERS	temperature, of polymerization
CHEMICAL ENGINEERING Meeting First World Convention,	centrifugalOct. 58-63 effect of physical chemical	equipment
Mexico City	parameters	two-way communication between
in the nuclear power industry . Nov. 67-84 techniques in aerospace, S.S Feb. 84-88	electricalOet, 51-57 porous materialsOct. 34-71	operator and computersOct. 98-98 CONSTRUCTION
Chemical industry, setting records,	Code of Ethics, ethics is a personal	avoid drag out, costs Nov. 48-58
NFeb. 32-23	thingApr. 35-37	the client/contractor syndrome Nov. 44-48
Chemical properties, effect on coalescenceOct. 72-76	ethics	lump sum bids not in vogue Nov. 51-57 plant, and safety Feb. 44-46
CHEMICALS	ethics, what it says	Converters, acetylene, probing for
acetylene from hydrocarbon-exygen mixtures	COLUMNS feedforward controlAug. 74-78	profit
acetylene manufacturerAug. 49-51	fractional crystallization Nev. 99-104	Cooling
acetylene production, mixer-burner design	intermediate reflux generators, correct	using sea water Feb. 100-102
aluminum alkyl compounds,	packaged, problemsSept. 89-90	Copolymers, polypropylene after
handling	point efficiencies for tray distillationsJuly 97-100	one-half decade Aug. 88-98 Copper, chemical route for refining.
ammonia as a solventJan, 139-144 ammonia is easy to handleJan. 66-71	purification, pilot plantJune 28-93	NFeb. 32-33
Ammonium nitrate-urea	reinforced plastics for corrosion resistance	CORROSION Detaclad and Pat-Cap team up, N Oct. 124
Australia's chemical industry Dec. 49-57	COMBUSTION	new resistant resin
butylene polymers gasoline Mar. 64-68	acetylene from hydrocarbon-oxygen	reinforced plastic resistance Apr. 49-52 titanium equipment Mar. 114-117
carbon black	flow phenomena and flame	Corporations, financing May 41-48
China, Mainland, chemical	technologyAug. 58-62	COSTS
industry Dec. 37-40 chlorine Mar. 94-109	mixer-burner design for acetylene production	accidents
dangerous and safetyFeb. 41-44	production	of buying used equipment Nov. 111-113
dropolene hydrogenation Mar. 74-76 ethylene/propylene terpolymer Apr. 15-19	probing for profit in acetylene	drag out, avoid Nov. 44-48
exports up; warning signs also up,	to produce sait cake, N Sept. 116-128	freight handling Dec. 13-19
NApr. 41-42 foods, synthetic, are a	suppression by design	fuel oil desulfurisationSept. 49-58 growth of R&D expendituresOct. 16-19
necessity	advanced classroom at Texas A&M.	lump sum bids not in vogue . Nov 51-57
fuel oil, what does it cost to desulfurise	N	manufacture of vinyl chloride .Jan. 31-26 reduced with improved catalysts Jan. 67-61
hazardous, handlingFeb. 51-55	COMPRESSORS	the safety dollarFeb. 56-58
hydrogen by palladium diffusion	chlorine	Cracking computer analysis and testing Oct. 87-92
isobutylene via extraction Mar. 77-80	pilot plant, controlJune 70-74	computer control of fluid catalytic
Japan's chemical industryMar. 41-48 lube oils, improvingMar. 69-73	COMPUTERS assist data processingJune 99-102	processOct. 93-98 Creativity, can we do without the
monoethanolamine degradation	bright future in heat transfer Jan. 91-96	innovator
preventing Apr. 82-85 New Zealand's chemical	control of pilot plantsJune 79-83	Critical path, scheduling nuclear
industry	Micro-Processing, NFeb. 112-120 on-line instrumentation and control	reactor construction
industry	on-line instrumentation and control	continuous
olefine, observations on Apr. 29-32 outlook bright MCA says, N Jan. 30 penetrating look at the CPI 45	systemsOct. \$7-92 operation-by-exception at Billings	Crystallizer, king-sized process unit, NApr. 41-42
penetrating look at the CPIApr. 45	refinery, NAug. 39	
industry	pilot plant data acquisitionJune 94-98 scale-up by advanced methods .June 57-61	D
pilot plant performanceJune \$8-98	streamlined data gathering	Data
polypropylene after one-haif decade	systemsJune 62-66 two-way communication between	gathering, catalytic cracker Oct. 87-92
potush and salt, debrining May 78-82	operator and computersOct. 93-98	gathering system, pilot plant . June 84-87 streamlined gathering systems . June 62-66
potassium chloride, separation Jan. 139-144 safety and the sales dilemma .Aug. 28-32	usage study begins, N	Data processing, computer assist cuts
silicones from GE, NOct. 38	estimating physical properties, the	Costs
sodium hydroxide Mar. 94-109	A.I.Ch.E. system	Dehydrogenation, computer analysis
structure coding May 103-108	method	and testingOct. 87-92 Depth analysis, in plant safety Feb. 47-50
sulfur, brightSept. 64-66	to and the state of the property of the state of the stat	Desaination, by the falling-him
sulfur transportationFeb. 72-76	Properties	DESIGN July 80-88
synthesis gas from residual	industryJune 63	alcohol distillation trays Sept. 82-88
fuels	CONTRACTORS avoid legal snarlsJune 42-44	boiling water nuclear reactors . Nov. 72-74
Thesis IndexJan. 97-102	client, syndrome	bond resistance of bimetallic finned tubesJuly 71-79
toxicity in design and production Peb. 59-62	how an engineering firm fits in June 37-28 how an equipment manufacturer can	The Challenge
ureaJan. 62-65	helpJune 39-41	depth analysis in plant safety . Feb. 47-50
solutions Jan 72-77	insurance checkoutSept. 30-34 intramural vs. extra-muralJune 25-27	explosion suppression systems . Sept. 38-41
vinyl acetate pilot plantJune 88-93 vinyl blending simplified, NJuly 134-145	the role of the contract research	flexible-tube heat exchangers .July \$5-62 heat exchangers to avoid
Vinvi chioride	organizationJune 30-34	foulingJuly 49-84
vinyl chloride	where the university standsJune 34-36	high pressure experimental
Ayrene by tractional	Contracts	unitJune 70-76 mixer-burner, for acetylene
erystallizationNov. 99-104	lump sum and incentive Nov. 44-48 lump sum, not in vogue Nov. 51-57	production
35-1-1	ACMININGS	nuclear power reactors Nov. 75-77
Mainland, chemical industry Dec. 37-40 Nationalist, chemical industry Dec. 33-36	CONTROL automatic weight balancesJune 75-78	nuclear systems, pressurized water reactors

plant, safety inFeb. 44-46	place, N	historySept. 86-88
point efficiencies for tray distillationsJuly 97-100	how do you develop professional peopleJuly 29-30	and the second s
safe, the designers concern Aug. 19-23	how they use literature Mar. 30-34	
for safety Feb. 41-44 stable distillation trays Sept. 74-75	how to measure performance . July 22-24 motivation a personal thing July 27-28	r
ternary distillation Sept. 31-94	the personal evaluationJuly 34-27	Feeders, solidsFeb. 77-82
toxicity in Feb. 59-62	putting information to work . Mar. 35-37 Enthalpy, total, method for heat	FERTILIZERS
Desulfurization, fuel oil, what does it cost . Sept. 49-58	balances	ammonia is easy to handleJan. 66-71 chemical industry growth in
cost	Entrainment, photographic	IndiaJune 107-112 food, outlook is optimistic, NOct. 33
Development, professionalJuly 29-30	evidence	food, outlook is optimistic, N Oct. 33 improved catalysts reduce costs Jan. 57-61
Diaphragm cells, for chlorine production	Equilibrium, vapor-liquid, Thesis	improvements in ures plants Jan. 02-05
Dielectrophoresis, coalescence Oct. 51-57	IndexJan. 97-102	nitrogen-, worldwideApr. 30-22 \$100 million plant scheduled, NMay 62
DIFFUSION coefficients, estimation	EQUIPMENT automatic weight balancesJune. 75-78	\$100 million plant scheduled, N May 62 Fiberglass, filament wound, tanks Apr. 57-64
techniques	bond resistance of bimetallic	Fibera, polypropylene after one-half
Thesis IndexJan. 97-102	finned tubesJuly 71-79	decade
Dimerization, isoprene process scale-upJune 57-61	centrifugal coalescersOct. 58-73 centrifugal extractionMay 69-78	Filament Winding, fiberglass
Desalination, advances in sea water	centrifugal separators May 74-77	tanks
distillation processesAug. 68-73	centrifuges for continuous	Films, polypropylene after one-nair
Discounted cash flow, economic analysis of R&D projects July 106-110	operation	decade
Discs, rupture	Detaclad and Pat-Cap team up, N Oct. 124	FINANCE
Disperser, solids	difficulties in getting firm prices Nov. 51-57	n complex thing
alcohol	electrical coalescers Oct. 51-57 the electrothermal fluidized bed Feb. 63-67	the ROI yardstick
case historiesSept. 36-38	falling-film sea water	what investors think of
design for safety	desalinationJuly 80-88 flexible-tube heat exchangersJuly 55-62	chemicals
separation	flow geometry and heat exchanger	bimetallic, bond resistance July 71-79
feedforward controlAug. 74-78	performanceJuly 63-70	use in heat exchangersJuly 49-54
intermediate reflux generators	fluidized-droplet reactor July 101-105 heat exchanger design July 49-54	Fire Prevention, reference material
point efficienciesJuly 97-100	the high capacity vibrating	FLAMES
problems of a packed column Sept. 89-90	centrifuge	acetylene mixer-burner Aug. \$2-55
sea water, advances Aug. 69-73 Thesis Index Jan. 97-103	highlights from the Chem Show Nov. 129 high pressure experimental unit June 70-74	acetylene, technologyAug. 49-51 effect of flow phenomena Aug. 56-62
trouble with transients Sept. 74-76	insurance checkoutSept. 30-34	stabilization in acetylene
trouble with transients Sept. 74-75 zero gravity separation Sept. 76-81	made from polyester resins Apr. 74-76	production
Distribution, getting products to customers	manufacturer should know how to applyJune 39-41	electrothermalFeb. 63-67
Dripolene, upgrading by	minimum attention operations June 84-87	electrothermal
hydrogenation	mixer-burner design for acetylene	recovery
Prying Nor 94-019	production	reactorJuly 191-195
in high temperature gas-cooled	performance of trickle bed	Fluid Dynamics, and plant safety Feb. 47-50
nuclear reactor Nov. 78-81	reactors	Fluid Flow geometry and heat exchanger
Dynamics, of nuclear power reactors	pilot- and plant-scale fluidized bed calcinersJuly 89-96	performanceJuly 92-70
10001018	Quickmix process	phenomena and flame
	reinforced plastics for corrosion resistance	technology
E	ruptured discs	Foaming, in alcohol rectification Sept. \$2-85
ECONOMICS	scale-up of a fluidized-droplet	food division formed by A.I.Ch.E., N Nov. 61
of ammonia handlingJan. 67-71	reactorJuly 101-105 streamlined data gathering	fertilizer outlook is optimistic, N Oct. 23
of buying used equipment Nov. 111-113 growth of R&D expenditures Oct. 16-19	systemsJune 62-66	synthetic, are a necessity Oct. 101-105
do profits and ethics conflict Feb. 20-23	titanium	fouling in flexible-tube heat exchangers July 55-62
save money by stopping air	of titanium, sirconium and tantalum	preventing in heat exchangers .July 49-54
of spent liquor recovery May 110-120	used, how to buy	Fuel Cells, biochemical Dec. 65-68
EDUCATION	using sea water as coolantFeb. 100-102 zero gravity stillSept. 76-81	Fuel Oil, desulfurization costs Sept. 49-58 Furnaces
advanced classroom communications	Equilibrium Properties, data and	computer analysis and testing .Oct. 87-92
at Texas A&M, NOct. 38 are you in a fur-lined foxholeOct. 30-32	estimating methods Dec. 58-64	the electrothermal fluidized bed Feb. 43-67
how do you develop professional	Esters, fractional crystallisation Nov. 99-104 ESTIMATING	
knowledge available for the	physical properties, the A.I.Ch.E.	G
askingJune 55 long distance lectures explored, N Aug. 38	system	Gasoline
long distance lectures explored, N Aug. 38	physical properties using route selection	hydrogenated selective butylene
Michigan State University miniaturizes labs. N	ETHICS	polymer
participation in professional societies,	in business	isomerization means better yields
N Feb. 32-33 Professor's income rises, N Sept. 42	clients, contractors and R&D June 45-47	Generators, nuclear
program to assist engineers, professors	it's easy to be ethical-	Geometry, flow, and heat exchanger
and students in newly-developed	sometimesFeb. 16-20	performanceJuly \$3-70 GOVERNMENT
countries	it's the individual's responsibility Apr. 38 more than a practical code Feb. 13-16	A.I.Ch.E. Committee gets official
resurgence on campusJan. 53 what happens to engineersAug. 32-35	problems	nodMar. 49
what should I study May 55-59	is a personal thingApr. 35-37 and profits, do they conflict Feb. 20-23	effect on R&DJuly 31-35 industry, cooperation growsSept. 23-24 industry partnershipSept. 25-27
Efficiency, point, for tray distillationJuly 97-100	protection for the employer Apr. 33-35	industry partnershipSept. 25-27
Elastomers, ethylene/propylene		
terpolymer	what the Code saysFeb. 39	joint effort with urgedin air
	Ethylene, uses and trendsApr. 29-32	conservation
	Ethylene uses and trends Apr. 29-32 Ethylene/Propylene Terpolymer, where is it heading	conservation
microorganisms	Ethylene, uses and trends Apr. 29-32 Ethylene/Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production	conservation
microorganisms	Ethylene, uses and trends	Conservation
microorganismsDec. 65-68 Electrochemistry, Thesis IndexJan. 97-102 Electrofining, coalescenceOct. 51-57 Electrostatics, coalescersOct. 51-57	Ethylene, uses and trends Apr. 29-22 Ethylene (Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation	Conservation
microorganisms Dec. 65-68 Electrochemistry, Thesis Index Jan. 97-192 Electrofining, coalescence Oct. 51-57 Electrostatics, coalescers Oct. 51-57 Electrothermal fluidized bed, operation and potential Feb. 63-67	Ethylene, uses and trends Apr. 29-32 Ethylene (Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110	HAZARDS. See Safety HEAT EXCHANGERS aluminum, No. Mar. 46
microorganisms Dec. 55-68 Electrochemistry, Thesis Index Jan. 97-102 Electrofining, coalescence Oct. 51-57 Electrostatics, coalescers Oct. 51-57 Electrothermal fluidized bed, operation and potential Feb. 63-67 Employment	Ethylene, uses and trends Apr. 29-22 Ethylene (Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 24-27 personal July 24-27	H Hazards, see safety HEAT EXCHANGERS aluminum, N bond resistance of bimetallic
microorganisms Dec. 55-68 Electrochemistry. Thesis IndexJan. 97-102 Electrolining. coalescenceOct. 51-57 Electrostatics. coalescersOct. 51-57 Electrothermal fluidized bed, operation and potential	Ethylene, uses and trends Apr. 23-22 Ethylene (Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 36-38 Evaporation, of Ilquids in storage	Conservation
microorganisms Dec. 55-68 Electrochemistry, Thesis Index Jan. 97-102 Electrolning, coalescence Oct. 51-57 Electrostatics, coalescers Oct. 51-57 Electrothermal fluidzed bed, operation and potential fluidzed bed, operation costs of changing a job Sept. 47 what happens to engineers Azz. 34-35 Emulsions, in alkylation Now 94-98	Ethylene, uses and trends Apr. 29-32 Ethylene (Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 36-38 Evaporation, of liquids in storage tanks Dec. 59-74	HAZARDERS Aluminum. No. Mar. 46 bond resistance of bimetallic finned stubes July 71-79 flexible-tybe July 55-62 flow geometry and performance July 63-70
microorganisms Dec. 55-68 Electrochemistry. Thesis IndexJan. 97-102 Electrodining. coalescence Oct. 51-57 Electrostatics. coalescersOct. 51-57 Electrothermal fluidized bed, operation and potentialFeb. 63-67 Employment	Ethylene, uses and trends Apr. 23-22 Ethylene (Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 36-38 Evaporation, of liquids in storage tanks Dec. 53-74 EVAPORATORS	HAZARDAS See SAIGLY HEAT EXCHANGERS aluminum. N
microorganisms Dec. 55-68 Electrochemistry, Thesis Index Jan. 97-102 Electrofining, coalescence Oct. 51-57 Electrostatics, coalescers Oct. 51-57 Electrothermal fluidized bed, operation and potential Feb. 63-67 Employment costs of changing a job Sept. 47 what happens to engineers Aug. 34-35 Emulsions, in alkylation Nov. 94-98 ENGINEERING avoid drag out, costs Nov. 48-50	Ethylene, uses and trends Apr. 23-22 Ethylene Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 36-38 Evaporation, of liquids in storage tanks Dec. 53-74 EVAPORATORS falling-film July 80-88 kink-sized process unit. N Apr. 41-42	Hazards, see safety HEAT EXCHANGERS aluminum. N. Mar. 46 bond resistance of bimetallic finned jubes July 71-79 flexible-tybe July 55-82 flow geometry and performance July 63-70 no fooling—no fouling July 49-54 in sea water desalination July 90-88 titanium Mar. 114-117
microorganisms Dec. 55-68 Electrochemistry, Thesis Index Jan. 97-102 Electrofining, coalescence Oct. 51-57 Electrostatics, coalescence Oct. 51-57 Electrothermal fluidized bed, operation and potential Feb. 63-67 Employment costs of changing a job Sept. 47 what happens to engineers Azz 34-35 Emulsions, in alkylation Nov. 94-98 ENGINEERING avoid drag out, costs Nov. 48-50 the client/contractor syndrom Nov. 14-48 design for safety Feb. 41-44	Ethylene, uses and trends Apr. 29-22 Ethylene (Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins. N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 36-38 Evaporation, of liquids in storage tanks Dec. 63-74 EVAPORATORS falling-film July 80-88 king-sized process unit, N Apr. 41-42 to produce prilled urea Jan. 62-65	HAZARDERS ALUMINUM. Nov. 163 HEAT EXCHANGERS Aluminum. Nov. 163 Bond resistance of bimetallic finned itubes July 71-79 flexible-tybe July 55-82 flow geometry and performance July 63-70 no fooling—no fouling July 49-54 in sea water desalination July 90-83 titanium Mar. 114-117 HEAT TRANSFER
microorganisms Dec. 55-68 Electrochemistry. Thesis IndexJan. 97-102 Electrofining. coalescence Oct. 51-57 Electrostatics. coalescence Oct. 51-57 Electrothermal fluidized bed, operation and potential	Ethylene, uses and trends Apr. 23-22 Ethylene Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 36-38 Evaporation, of liquids in storage tanks Dec. 53-78 EVAPORATORS falling-film July 80-88 king-sized process unit, N Apr. 41-42 to produce prilled urea Jan. 62-65 Exchange Engineering, more needed.	HAZARDERS aluminum. Nov. 163 HEAT EXCHANGERS aluminum. Nov. 163 bond resistance of bimetallic finned itubes July 71-79 flexible-tiple July 75-82 flow geometry and performance July 63-70 no fooling—no fouling July 49-54 in sea water desalination July 49-54 titanium Mar. 114-117 HEAT TRANSFER balances by the total enthalpy method Feb. 68-71
microorganisms Dec. 55-68 Electrochemistry. Thesis IndexJan. 97-102 Electrolining. coalescenceOct. 51-57 Electrostatics. coalescersOct. 51-57 Electrothermal fluidized bed, operation and potentialFeb. 63-67 Employment	Ethylene, uses and trends Apr. 23-22 Ethylene (Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 36-38 Evaporation, of liquids in storage tanks Dec. 53-74 EVAPORATORS falling-film July 80-88 king-sized process unit, N Apr. 41-42 to produce prilled urea Jan. 62-65 Exchange Engineering, more needed, N May 63 Explosions	H Hazards, see safety HEAT EXCHANGERS aluminum, N. Mar. 46 bond resistance of bimetallic finned stubes July 71-79 flexible-tybe July 55-62 flow geometry and performance July 63-70 no fooling—no fouling July 49-54 in sea water desalination July 90-88 titanium Mar. 114-117 HEAT TRANSFER balances by the total enthalpy method Feb. 68-71 bond resistance of bimetallic finned
microorganisms Dec. 55-68 Electrochemistry. Thesis IndexJan. 97-102 Electrolining. coalescenceOct. 51-57 Electrostatics. coalescenceOct. 51-57 Electrostatics. coalescensOct. 51-57 Electrothermal fluidized bed, operation and potentialFeb. 63-67 EmploymentSept. 47 what happens to engineersAug. 34-35 Emulsions, in alkylationNov. 94-98 ENGINEERING avoid drag out, costsNov. 48-50 the client/contractor syndrome Nov. 14-48 design for safetyFeb. 41-44 National Academy now a fact, NJan. 30 organization relationship to R&DJune 37-38	Ethylene, uses and trends Apr. 23-22 Ethylene (Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 36-38 Evaporation, of Ilquids in storage tanks Dec. 53-74 EvAPORATORS falling-film July 80-83 king-sized process unit, N Apr. 41-42 to produce prilled urea Jan. 62-65 Exchange Engineering, more needed, N May 63 Explosions suppression by design Sept. 33-41	HAZARDERS Aluminum. Nov. 163 HEAT EXCHANGERS Aluminum. Nov. 163 Bond resistance of bimetallic finned jubes July 71-79 flexible-tiple July 55-62 flow geometry and performance July 62-70 no fooling—no fouling July 49-54 in sea water desalination July 80-88 titanium Mar. 114-117 HEAT TRANSFER balances by the total enthalpy method Feb. 68-71 bond resistance of bimetallic finned tubes July 71-79
microorganisms Dec. 55-68 Electrochemistry. Thesis IndexJan. 97-102 Electrofining. coalescenceOct. 51-57 Electrostatics. coalescenceOct. 51-57 Electrothermal fluidized bed, operation and potential	Ethylene, uses and trends Apr. 23-22 Ethylene (Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 24-32 Evaporation, of liquids in storage tanks Dec. 53-74 EVAPORATORS falling-film July 80-88 king-sized process unit, N Apr. 41-42 to produce prilled urea Jan. 62-65 Exchange Engineering, more needed, N May 63 Explosions suppression by design Sept. 33-41 urea-ammonium nitrate	HAZARDERS ALUMINUM. Nov. 163 HEAT EXCHANGERS Aluminum. Nov. 163 Bond resistance of bimetallic finned jubes July 71-79 flexible-tiple July 55-62 flow geometry and performance July 62-70 no fooling—no fouling July 49-54 in sea water desalination July 90-88 titanium Mar. 114-117 HEAT TRANSFER balances by the total enthalpy method Feb. 68-71 bond resistance of bimetallic finned tubes July 71-79 Boston, 8-8. Dec. 84-94 bright future for computers Jan. 91-96
microorganisms Dec. 55-68 Electrochemistry. Thesis IndexJan. 97-102 Electrolining. coalescenceOct. 51-57 Electrostatics. coalescenceOct. 51-57 Electrostatics. coalescensOct. 51-57 Electrothermal fluidized bed, operation and potentialFeb. 63-67 EmploymentSept. 47 what happens to engineersAug. 34-35 Emulsions, in alkylationNov. 94-98 ENGINEERING avoid drag out, costsNov. 48-50 the client/contractor syndrome Nov. 14-48 design for safetyFeb. 41-44 National Academy now a fact, NJan. 30 organization relationship to R&DJune 37-38	Ethylene, uses and trends Apr. 23-22 Ethylene Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 24-32 Evaporation, of liquids in storage tanks Dec. 33-74 EVAPORATORS falling-film July 80-88 king-sized process unit, N Apr. 41-42 to produce prilled urea Jan. 62-65 Exchange Engineering, more needed, N May 63 Explosions suppression by design	Hazards, see safety HEAT EXCHANGERS aluminum. N. Mar. 46 bond resistance of bimetallic finned stubes July 71-79 flexible-type July 55-62 flow geometry and performance July 63-79 no fooling—no fouling July 49-54 in sea water desalination July 90-88 titanium Mar. 114-117 HEAT TRANSFER balances by the total enthalpy method Mar. 141-17 bond resistance of bimetallic finned tubes J. July 71-73 Boston, 8-8. Dec. 84-94 bright future for computers Jan. 91-96 depth analysis in plant safety. Feb. 47-50
microorganisms Dec. 55-68 Electrochemistry. Thesis IndexJan. 97-102 Electrodining. coalescenceOct. 51-57 Electrostatics, coalescersOct. 51-57 Electrothermal fluidized bed, operation and potential	Ethylene, uses and trends Apr. 23-22 Ethylene Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation	H Hazards, see safety HEAT EXCHANGERS aluminum. N bond resistance of bimetallic finned jubes July 71-79 flexible-tiple July 55-62 flow geometry and performance July 63-70 no fooling—no fouling July 49-54 in sea water desalination July 49-88 titanium Mar. 114-117 HEAT TRANSFER balances by the total enthalpy method Feb. 68-71 bond resistance of bimetallic finned tubes July 71-73 Boston, 8.8. July 71-73 Boston, 8.8. Dec. 84-94 depth analysis in plant safety Feb. 47-50 effect of vapor losses in storage
microorganisms Dec. 55-68 Electrochemistry, Thesis Index Jan. 97-102 Electrofining, coalescence Oct. 51-57 Electrostatics, coalescence Oct. 51-57 Electrothermal fluidized bed, operation and potential Feb. 63-67 Employment Costs of changing a job Sept. 47 what happens to engineers Asz. 34-25 Emulsions, in alkylation Nov. 94-98 ENGINEERING avoid drag out, costs Nov. 44-50 the client/contractor syndrome Nov. 44-48 design for safety Feb. 41-44 National Academy now a fact, N. Jan. 30 nuclear/chemical Nov. 67-84 organization relationship to R&D June 37-38 professional May 49-54 safety and loss prevention Aug. 32-33 salaries Feb. 30-31 ENGINEERS Characteristics have remained almost	Ethylene, uses and trends Apr. 23-22 Ethylene Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation economic analysis of projects July 106-110 personal July 24-27 R&D projects July 36-38 Evaporation, of liquids in storage tanks Dec. 39-74 EVAPORATORS falling-film July 80-88 king-sized process unit, N Apr. 41-42 to produce prilled urea Jan. 62-65 Exchange Engineering, more needed. N May 63 Explosions suppression by design Sept. 38-41 urea-ammonium nitrate solutions Jan. 72-77 Expositions. 38th of the Chemical Industries Nov. 123-159 Exposure, 50 toxic chemicals Feb. 59-62 Extraction	H Hazards, see safety HEAT EXCHANGERS aluminum. N bond resistance of bimetallic finned jubes flow geometry and performance July 63-70 no fooling—no fouling July 49-54 in sea water desalination July 90-85 titanium Mar. 114-117 HEAT TRANSFER balances by the total enthalpy method Feb. 68-71 bond resistance of bimetallic finned tubes J. July 71-73 Boston, 8.8. July 71-73 Boston, 8.8. July 71-73 Boston, 8.8. July 71-74 depth analysis in plant safety Feb. 47-50 effect of vapor losses in atorage tanks Dec. 69-74 filament wound fiberglass Apr. 57-64
microorganisms Dec. 55-68 Electrochemistry. Thesis IndexJan. 97-102 Electrodining. coalescenceOct. 51-57 Electrostatics, coalescersOct. 51-57 Electrothermal fluidized bed, operation and potential	Ethylene, uses and trends Apr. 23-22 Ethylene Propylene Terpolymer, where is it heading Apr. 15-19 Ethylenimine, commercial production begins N Mar. 45 Europe, petrochemical market Apr. 23-25 Evaluation	HAZARDA, see safety HEAT EXCHANGERS aluminum. N

performanceJuly 63-76	Isobutylene, via extractionMar. 77-80 Isomerization	Quickmix, continuous process Feb. 77-82
nuclear reactor	isoprene process scale-upJune 57-61 means better yieldsMar. 58-58	Molecular structure, use in determining engineering properties Dec. 58-64
nuclear, pressurized water Nov. 68-71	means better yields	Monoethanolamine, preventing
sea water as a coolantFeb. 100-102 sea water desalination by the	1	Monte Carlo techniques long
falling-film processJuly 80-88	Japan	range planningJan. 87-87 simulation toolJan. 75-82
Thesis IndexJan. 97-102 Heavy Oils, upgradingMar. 59-63	chemical industry Dec. 41-48	Motivation, a personal thingJuly 37-28
Heavy Oils, upgrading	U. S, chemical trade continues up, N	1
recovery in nuclear reactors Nov. 75-77	Jet fuel, hydrocrackingMar. 59-62	N /
Helium, from nuclear reactors, purification		National Engineers' Week, N Jan. 50
Hydrocarbons	K	National Science Foundation, sponsored study on information
from oil shale, oil sands and coal, S.SAug. 84-87	Key Words, index/abstracts, study of	retrieval
S.S	use	New Zealand, chemical industry. Dec. 49-57 NUCLEAR
heavy oils	KINETICS of nuclear power reactors Nov. 81-84	boiling water reactorsNov. 72-74 heavy water reactorsNov. 75-77
hydrogen plant influences economics	nuclear, pressurized water Nov. 68-71	high temperature, gas-cooled
HYDROGEN use to make octanesMar. 64-68	Thesis IndexJan. 97-102	power, forecast, N
by palladium diffusion Mar. 81-85		power reactors, transient / Nov. 81-84
integrate production with refinery operation	L	pressurized water reactors Nov. 68-71
HYDROGENATION	Laboratory, design for safety Feb. 41-44	systems analysis
of butylene dimers	Lasers, continuous high power, achieve, N	part XI. 8.8
upgrading dripolene Mar. 74-76 to upgrade petroleum Mar. 69-73	Law, avoid snaris between clients and contractorsJune 42-44	part XIV, 8.8June 104-106
Hydrotreating	Law of Corresponding States, use in	Nuclear Power, role of chemical engineering in
performance of trickle bed reactors	engineering data correlation . Dec. 58-64 Liquefaction, of chlorineMar. 94-109	Nuclear reactors, chemical engineering aspects
to upgrade petroleumMar. 69-73	LITERATURE how engineers use	engineering aspects
	information storage/retrieval: is it	0
1	working	Oll shale hadanashan form off
	Lube oils, improving	Oil shale, hydrocarbons from oil sands and coal, S.SAug. 84-87
Ideas, stronger than armies Feb. 26-29 Incentives, what kind for salaried		OPERATIONS pilot plant, minimum
personnel	M	attentionJune 84-87
growthJune 107-112	MAINTENANCE	there's money in safety Aug. 19 there's money in safety Sept. 28-36 OPINION AND COMMENT
INDUSTRY government cooperation grows. Sept. 23-24	depth analysis in plant safety. Feb. 47-50 design for safety Feb. 41-44	opinion and comment a bigger part in a smaller worldAug. 47
government-, myth of partner- shipSept. 25-27	of fouled heat exchangersJuly 47-54	bully for the AICPASept. 47
identify objectives with your	of used equipmentNov. 111-113 MANAGEMENT	the Challenge of DesignDec. 31 an end to the private prying eye. May 67
company, NJuly 41-42 injury frequency rate on the	direction of R&D via marketingOct. 26-29	forming the formative yearsOct. 49 the game's not the sameJan. 55
riseSept. 35-37	insurance and loss prevention. Aug. 24-27	getting to know youJuly 47
INFORMATION handling by Micro-Processing,	meshing R&D and marketing Oct. 15 stake in water pollution	involvement is necessary Nov. 65 knowledge available for the
NFeb. 112 harvest from patents, NJuly 41-42	what do researchers want most . Oct. 34	money in the till
how engineers use	what R&D needsOct. 20-24 Manpower, technical, increased demand predicted through '70, NOct. 39	\$120 million worth of talent Mar. 51
National Referral Center compiles comprehensive inventory on info	predicted through '70, NOct. 39	what the code of ethics says Feb. 39 OPTIMIZATION
resources, NJuly 18 putting it to workMar. 35-37	Manufacturers, should know how to apply equipmentJune 39-41	acetylene converters Aug. 49-51 of alkylation processes Nov. 94-98
safety obtaining	MARKETING	computer of fluid catalytic
storage/retrieval, is it working Mar. 23-29 support personnel here to stayMay 65	calls the shotsOct. 16-19 can we do without the	macrosystems
Inhalation, of toxic chemicals Feb. 59-62 Injection Molding, polypropylene. Aug. 88-95	innovatorOct. 24-26 direction of R&D via,Oct. 26-29	nuclear power reactors Nov. 75-77 parallel units by computer Oct. 83-86
Injuries frequency rate on the	getting products to customers. Dec. 13-19	self-directedJune 79-83
riseSept. 35-37 INSTRUMENTATION	meshing with R&DOct. 15 new productsJan. 27-29	Organic Chemicals, chemical industry growth in IndiaJune 107-113
design for safety	what R&D needsOct. 20-24 Market research, the changing	Organization, what R&D needs Oct. 20-24 Osmosis, principle of zero gravity
plantsJune 79-83	pattern of chemical R&DJuly 31-35	oxidation Sept. 76-81
on-line control systems Oct. 87-92 for Quickmix process Feb. 77-82	Markets, ethylene/propylene terpolymer	computer controlOct. 83-88
Insulation, for ammonia tanks Jan. 58-90	MASS TRANSFER in fluidized droplet reactor July 101-105	in high temperature gas-cooled nuclear reactor
Insurance management and loss preven-	limits alkylation reactions Nov. 94-98	of hydrogen sulfide to recovery
tionAug. 24-27 where they stand in safety Sept. 30-34	nuclear, pressurized water Nov. 68-71 point efficiencies for tray	partial, of residual fuels Nov. 85-88
Inter-American Chemical Exposition, San Juan, Puerto Rico, N Feb. 130	distillationsJuly 97-100 Thesis IndexJan. 97-102	Oxychlorination, new production routs to cinyl chloride
Inter-American Confederation of	MATERIALS	to the cultive the control of the care
Chemical Engineering, A.I.Ch.E. involvement	case histories of stainless steel	P
INTERNATIONAL	of construction for rupture	Packing, column, problemsSept. 89-90
A.I.Ch.E. activities	metallic filaments, N Mar. 143-150	PATENTS
Australia's chemical industry Dec. 49-57 contractors, growth	Thesis IndexJan. 97-102 MATERIALS HANDLING	tilents, contractors and R&D June 45-47 harvest information from, N July 41-42
Europe's petrochemical market, Apr. 28-25 First World Convention of Chemical	aluminum alkyl compounds Apr. 105-110	bangs over it, N May 63
Engineering, Mexico City Dec. 24-25	hazardous chemicalsFeb. 51-55 sulfurFeb. 72-76	Penex Process, for isomerization Mar. 63-68
IndiaJune 107-112 Japan's chemical industryDec. 41-48	Mathematics, applied, and process control, S.SSept. 96-99	PERSONNEL how do you develop, motivate,
Mainland China's chemical industry	Medicine, and plant safety Feb. 51-55	measure, reward professional peopleJuly 21
New Zealand's chemical	Meetings First World Convention of Chemi-	how do you develop professional
Industry	cal Engineering, Mexico City. Dec. 24-25 1965 Gordon ConferencesApr. 134	you don't have to hurt people. Sept. 85-37
chemical industry Dec. 49-57	highlights from the Chem	how to measure performanceJuly 22-24 motivation a personal thingJuly 27-28
Puerto Rico petrochemical potential, NNov. 60	Show	the personal evaluationJuly 24-27
Taiwan's chemical industry Dec. 33-36 program to assist engineers, pro-	Mercury cells, design and construction	salaried, what kind of incentives Nov. 63 PETROCHEMICALS
fessors and students in newly-	Metallurgy, the electrothermal	Europe's market
developed countriesAug. 38-37 U. S. chemical sales tops in Japan,	fluidized bed Feb. 63-67 Microorganisms, for energy	the first parastick May 35-40
N	production	statistics, what they mean Apr. 26-28 Phenolic Plastics, reinforced Apr. 57-44
Investment, the changing pattern of chemical R&DJuly 31-35	entrainment ,Sept. 82-35	Philippines, Republic of the, chemical
Ion Exchange, processes for spent acid recovery	Mixers, jet	Phosphorus, production by electro-

thermal fluidized bed	in porous material coalescers. Oct. 64-71	bed calcinersJuly 89-96
PHYSICAL PROPERTIES A.I.Ch.E. system for prediction. May 93-95	Pressurized Water Nuclear Reactors, design and analysis	wastes, disposal by fluidized bed calcinerJuly 89-96
chemicals structure coding May 102-108	Prices, projecting for marketingOct. 26-29 PROCESS CONTROL	Calciner
data and estimating methods, review	and applied mathematics, S.S Sept. 96-99	Reactions, for acetylene production
effect on coalescenceOct. 72-76	Thesis Index	Reactive Metals, use in the
review	Process Simulation, scale-up by	REACTORS May 121-126
automatic weight balances June 10-10	advanced methodsJune 57-61 PROCESSES	acetylene mixer-burner design. Aug. 52-55
case history of a micropilot plantJune 88-93 computer assisted data processing	automatic weight balances June 75-78	for acetylene productionAug. 63-67 alkylation, draft-tubeNev. 94-98 boiling water, nuclearNov. 72-74
computer assisted data processing cuts costsJune 99-102	biological, for energy	boiling water, nuclear Nov. 73-74
development, the automated	production	design for safetyFeb. 41-44 high pressure, pilot plantJune 70-74
Muldized bed calcinersJuly 19-96	the problems of the pastOct. 30-32	nuclear, high temperature, gas- cooledNov. 78-81
grouping automated uritsJune 67-69	chlor-alkali	nuclear, heavy waterNov. 75-77
minimum attention operations. June 84-87 novel concepts in automating. June 79-83	crackingOet. \$3-98	nuclear power
scale-up by advanced methodsJune 57-61	continuous fractional	nuclear, pressurized water Nov. 68-71 nuclear, transient analysis Nov. 81-84
systemsJune 62-66	debrining potash and saltMay 78-82	pilot plant automationJune 79-83 polymerization, temperature
sulfur bright	depth or surface coalescing Oct. 64-71	control
PIPES design for safetyFeb. 41-44	development, the automated wayJune 94-93	safetyAug. 19-23 trickle bed, performanceOct. 77-82
enowy resin system performance is	economics of spent liquor	Reboilers design
outstanding	recovery	designJuly 49-54 trouble with transientsSept. 74-75
reinforced plastics for corresion	extractionJune 88-93 falling-film, sea water	Recruiting, costs of changing a job
resistance	desalinationJuly 80-88	Rectifiers, for chior-alkali
Planning, long rangeJan. 83-87 PLANTS	handling hazardous chemicals. Feb. 51-55 high purity isobutylene via	plants
Jan 66-71	extraction	chemical route for copper, N Feb. 32-33
avoid drag out costs Nov. 48-50 chlor-alkali	hydrogen by palladium diffusion	generalized flow sheet Sept. 49-58 high purity isobutylene via
	use hydrogen to make	extraction
syndrome	octanes	integrate hydrogen production. May \$8-92
crystallisation	isomerization means better yields	isomerization means better yields
depth analysis for safetyFeb. 47-50 designing for safetyFeb. 44-46	isoprene, scale-upJune 57-61	operations improved by process
eliminating accidentsSept. 35-37 ethylenimine, production begins,	jet fuel decontaminationOct. 58-63 optimizing alkylationNov. 94-98	simulation
N	oxidation computer control Oct. \$3-86	upgrade heavy oils, increase
falling-film see Water	package plants for sulfur recovery	profits
evaporation	packaged acid treating May 74-77	hydrogenation
	partial combustion of residual fuels	use hydrogen to make octanes
extraction	Quickmix	Reflux Generators, intermediate,
hydrogen recovery	safety versus dollarsFeb. 56-58 sea water distillationAug. 69-73	Reforming, pilot plant
pollution control	separation of potassium	REINFORCED PLASTICS
packaged gas absorbers, N Aug. 116-122	chloride	for corrosion resistanceApr. 49-52
	sulfur dioxide recovery Nov. 89-93 Thesis Index	epoxy resin systemApr. 65-69 filament wound fiberglass
sea water distillationAug. 69-73 strategy for optimizingMar. 86-93	UOP Penex process	tanks
ures improvements gaiore Jan. 62-90	upgrading dripolene by	new chemically resistant resinApr. 70-78 polyester resins for process
PLASTICS epoxy resin systemApr. 65-69	hydrogenation Mar. 74-76 vinyl chloride Jan. 21-26	equipment
polypropylene after one-half	what does it cost to desulfurize fuel oil	RESEARCH AND DEVELOPMENT advances in sea water distillation
decade	when to buyJune 37-38	Drocesses
resistanceApr. 49-52 POLLUTION	PRODUCTION communication with R&DOct. 20-24	air pollution, industry spending needs upping. N Aug. 38
were also air pollution, water pollution	design for safetyFeb. 41-44	needs upping, NAug. 38 avoid legal snarlsJune 42-44
air, save money by stopping Nov. 89-93 economics of spent liquor	toxicity in	can we do without the innovatorOct. 24-26
recovery	definition and attributesJune 172 ethics is a personal thingApr. 25-37	innovator
conservation	are you in a fur-lined foxhole. Oct. 30-32	to do or not to doJuly 36-38
from fuel oil	Gallup survey puts engineers in second place, N	economic analysis of projectsJuly 106-110
sulfur oxides and other sulfur	P. E. licensing continues to be	how an engineering firm fits
compoundsJuly 45 water, managements stakeDec. 20-23	far from unanimous May 49-54 Professional Societies, what should	inJune 37-38 how an equipment manufacturer
Polyesters	they be doingMar. 38-40 Profits, clients, contractors and	can helpJune 39-41 intramural vs. extra-muralJune 25-27
tor process equipmentApr. 70-73	R&DJune 45-47	marketing calls the shots Oct. 16-19
reinforcedApr. 57-64	Propellents, continuous mixing processFeb. 77-82	meshing with marketingOct. 15 the role of the contract research
reinforced, piring systemApr. 53-56 Polyethylene, rest of the world	Propylene, uses and trendsApr. 29-32	organizationJune 30-34
catching up to U.S., NJan. 152 Polymerization	Propylene Oxide, uses and trendsApr. 29-32	utilizing the contractorJune 28-30 where the university stands June 34-36
of butylenes	Psychology, tests prove that fam-	what do researchers want most Oct. 34
temperature controlApr. 85-88 Polymers	iliarity can lead to errorsAug. 19-23 Public Relations contest, reveals out-	what it needsOct. 20-24 Resins
ethylene/propylene terpolymer Apr. 15-19	standing Local Sections	polypropylene after one-half
Thesis IndexJan. 97-102 Polyolefins, to top 4 billion ib. in	ActivitiesOct. 114-116 Pulp and Paper, economics of spent	decadeAug. 88-95 used to provide an all-weather.
'66, NJune 20-22	liquor recovery	non-skid, plastic track, NJune 50
Polypropylene, after one-half decade	Pumps, jet, in nuclear reactorsNov. 72-74 Purchasing, used equipmentNov. 111-113	Return on Investment financial yardstick
Polysulfone, hi-temperature	Purification, brine	yardstick questionedAug. 8-9
thermoplastic, N	P-V-T Relations, estimating methodsDec. 58-64	Rubber ethylene/propylene
Polyurethane low-temp barge for anhydrous	Pyrolysis, isoprens process scale-	terpolymer
ammonia, NJune 50 salvage mission, NJuly 41-42	upJune 57-61	synthetic, Shell's thermolastic doesn't
Potash, debrining	0	require vulcanization, NJune 129-138 Rupture Discs, as relief devicesFeb. 93-97
Potassium Chloride, ammonia as a solventJan. 139-144	Q	and the state of t
POWER	Quickmix, continuous mixing	
long range system planningJan. 83-87 nuclear, forecast, N	processFeb. 77-82	S
reactors, nuclear		SAFETY
Predicting, physical properties, the A.I.Ch.E. system	R	affects all parts of a companyAug. 19 Conference on Reliability and
Present Worth, economic analysis of	RADIOACTIVITY	Maintainability, NJune 9-22
R&D projectsJuly 106-110 Pressure Drop	handling materials in nuclear power reactorsNov. 75-77	costsFeb. 56-58 depth analysisFeb. 47-50
in flexible-tube heat exchangers. July 55-62	pilot- and plant-scale fluidized	you don't have to hurt people. Sept. 35-37

compounds	and air poliution	anhydrous ammonia, N June 50 sulfur, liquid
injury frequency rate on the rise	Sulfuric Acid, and air pollution Sept. 45 Suppression, by design Sept. 38-41	trouble with transients Sept. 74-75 weepage and leakage Sept. 82-85
stand	Surface Free Energy, effect on coalescenceOct. 72-76	Treating lube oils
prevention	Surfactants, effect on coalescence. Oct. 72-76 Surveys	petroleum, by coalescingOct. 51-57
from laboratory to production. Feb. 41-44 loss: the designer's concern Aug. 19-23	A.I.Ch.E. members	case upon case of ethics case
loss: your conscienceAug. 32-33 the operator's nightmareSept. 28-30	scientists and research managers	histories
prevention in addition to protection	SYMPOSIUM SERIES Chemical Engineering techniques	government A.I.Ch.E. Committee
protection	in aerospace	gets official nod
the sales dilemmaAug. 28-32	Hydrocarbons from oil shale, oil	in 1964
suppression by designSept. 38-41 toxicity in design and	sands, and coalAug. 84-87 Nuclear engineering—part XIApr. 92-96 Nuclear engineering—part	the polluted winds of change July 45 resurgence on campus Jan. 53
productionFeb. 59-62 of urea-ammonium nitrate	XIII	Sulfuric acid, sulfur dioxide, USPES, & MCASept. 45
solutionsJan. 72-77	Nuclear engineering—part XIVJune 104-106	TISP is here to stay
how does yours compareFeb. 30-31 Federal, are improvingFeb. 37 median was \$12,050 in 1964Oct. 47	Process control and applied mathematics	grows
Sales, meshing R&D and marketing. Oct. 15	Selected topics in transport phenomenaOct. 100 Synthesis Gas, preparationJan. 57-61	maiaried personnelNov. 63 Tubing, teflon, for heat
Salt, debrining	Synthesis Gas, preparation	exchangersJuly 55-63
by advanced methodsJune \$7-61 of a fluidized-droplet	T	**
reactorJuly 101-105 mixer-burner design for acetylene	-	U
pilot- and plant-scale fluidized	Taiwan, chemical industry Dec. 33-36 Tank Cars, world's largest, N Nov. 61	Unit Operations, new concepts must be developedOct. 30-32
bed calcinersJuly 89-96 Scheduling, avoid drag out costs. Nov. 48-50	ammonia storageJan. 67-71	University, where does it stand on industrial researchJune 34-36
Scholarship, A.I.Ch.E Award Winners	bad safety designFeb. 47-50 filament wound fiberglassApr. 57-64	Urea -ammonium nitrate solutions: Are
Sea Water as a coolantFeb. 100-102	reducing wapor breathing losses	they safeJan. 72-77 improvements in plantsJan. 62-65
by the falling-film processJuly 80-88 Selling, mafety	Tantalum, use in the CPIMay 121-126	improvements in plantsJan. 62-65 Urethanes, uses and trendsApr. 29-32 Utilities, source of air pollution
Semipermeability, principle of zero gravity still	Taxes, property, effect on product costs	
separation coalescence with perous	Technicians, 180, Cyanamid up-	V
material	Teffon, flexible-tube heat	VAPOR-LIQUID EQUILIBRIUM constants, estimationDec. 58-64
meters on coalescenceOct. 72-76 zero gravity distillationSept. 76-81	exchangersJuly 55-62 Ternary Systems, distillation	Thesis IndexJan. 97-102 Vapor Pressure, estimation techni-
SEFARATORS centrifugalOct. 58-63	design	Ques, status
fractional crystallisation Nov. 99-104 steam, in nuclear reactors Nov. 72-74	Thermal Conductivity, coemcients, correlation	performanceJune 88-98 Vinyl chloride, new production
Silicones, more from GE, NOct. 33 SIMULATION	A.I.Ch.E. filmstrip. N	route to
improves refining operationApr. 77-81 long range planningJan. \$3-87	data and estimating methods. Dec. 58-64 Thesis IndéxJan. 97-102	status
novel concepts in automating pilot	Thermophysical Properties, Symposium Purdue University, N. Feb. 35	
plantsJune 78-83 Sodium Hydroxide, prevents MEA	Thermoplastics polysulfone, N	W
degradation	sports car molded in two parts, NFeb. 32-32	Warehousing, site selection based on costs
sulfur analysisSept. 67-69 Spent Liquor	N	Waste disposal, pilot- and plant-scale fluidized bed calcinersJuly 89-96 Water, sea, as coolantFeb. 100-102
economics of recovery110-120 heat balances by the total enthalpy	Titanium	water rollution, managements
method	equipment	StakeDec. 20-23 Waves, flow phenomena and flame
vapor lossesDec. 69-74 Stainless Steel, case histories of	Toxicity, in design and productionFeb. 50-62	Weight balances, automaticJune 75-72
use	Trade, U. SJapan chemical trade continues up, N	World Congress of Chemical Engineer- ing, A.I.Ch.E. involvementOct. 166
and their managers queriedOct. 34 Statistics, petrochemical, what	continues up, N	
they mean	materials for operatorsFeb. 51-55 operator, for safetyFeb. 44-46	X
Storage of ammoniaJan. 67-71	Transfer units, for tray distillationsJuly 97-100 Transport properties, data and	Xylene, fractional crystallization
liquid, reducing vapor breathing losses	estimating data and estimating	
Styrene, containing polyester resins	methods	Z
SULFUR bright, a new route toSept. 64-66	phenomenaOct. 100 TRANSPORTATION	Zirconium, use in the CPI May 121-126
molten on-stream analysis Sept. 67-69 transportation	of ammoniaJan. 66-71 freight-tax handling costs Dec. 13-19	Zirconium oxide, production by electrothermal fluidized bed Feb. 63-67
100000000000000000000000000000000000000		
AI	ITHODE IND	FV

AUTHORS INDEX

A	
Ackerman, C. D June	67
Adam, P. JFeb.	20
Allott, G Sept.	
Amberson, C. B July	89
Anderson, M. L July 1	106
Angelo, N. BJune	79

Anhorn,	٧.	J		June	57
Applegat	te, f	F. L.	(Jr.)	Jan.	66
Asselin,	G.	F.,		Mar.	53

Baral, Bare,

В					
				Nov.	

Baumhart, R Feb.	16	Black, D. E
Becker, W. C Apr.	33	Blakeley, F
Belk, T. EOct.	72	Bosworth, (
Bell, R. LApr.	57	Boyd, J. M
Berlie, E. M Apr.	82	Bradley, J.
Beuther, H Mar.	59	Bradley, K.
Bieber, HJune	28	Brake, J

Black, D. EJuly	89
Blakeley, P Apr.	20
Bosworth, C. M Sept.	82
Boyd, J. M Aug.	49
Bradley, J. W Oct.	15
Bradley, K. J May	31
Broke I Dec	

- 5				
•	Brasie, W. C May 102	Goard, H. W Nov. 99	Lindahl, H. A Apr. 77	Rumpf, N. K Nov. 81
	Briggs, D. E Jan. 91	Goldberger, W. M Feb. 63	Liou, D. W May 102	Rzasa, M. JApr. 35
	July 71	Goodenough, R. D. Jan. 139	Lipps, D. A Feb. 72	S
965	Buividas, L. J May 88	Goodman, R. C July 106	List, H. L Dec. 33	
96	Burley, E. L Nov. 72	Gordon, W. E Aug. 19	Livingston, M. J Nov. 51	Samuels, M. E Apr. 15
-		Governale, L. J Apr. 105 Grabowski, G. J Sept. 38	Luyben, W. L Aug. 74	Samuels, W. E Jan. 72
-	С	Grekel, H Sept. 70	Ludwig, E. E July 24	Schenk, G Oct. 16
51	Cabot, L. W Feb. 13	Griffin, C. W Nov. 81	Ludwig, J. H Sept. 49	Schmidt, H. R May 88
~	Campbell, D. B Sept. 35	Griffin, R. A Sept. 67	Sept. 59	Schof, D. E. (Jr.) Sept. 67
نـ	Carr, J. W. (Jr.) June 84	Gunson, W. E Nov. 68		Schreuders, A Mar. 77
VOL.	Cavender, J. M Dec. 41	Gwyn, J. E Nov. 94	M	Schuler, R Oct. 30
-	Christoferson, E. A. Nov. 89 Cianciarulo, A. N. Apr. 65		McBride, R. B Mar. 81	Semrad, R Sept. 64
×	Cinnamon, S. J Dec. 69	Н	McClure, H. H Aug. 52	Sheeline, R. D Feb. 77
X	Claridge, E. L Nov. 94	Habermehl, RJan. 57	McGalliard, R Sept. 70	Sheppard, R. S Mar. 114
9	Comiskey, P. T Feb. 72	Hall, A. D May 41	McKay, D. L Nov. 99	Sheilds, S. E June 94
Z	Cooper, E. D July 89	Halley, P. D Feb. 59	McKinley, D. L Mar. 81	Short, B. E July 63 Silverman, H Dec. 65
0	Cooper, W. G Aug. 49	Hanway, J. E. (Jr.) Feb. 63	McNelly, M. J Nov. 72 McPherson, A. T Oct. 101	Silvus, R. F Apr. 105
EP	Corson, W. B June 99	Henderson, R. M Jan. 27	Malloy, J. B July 101	Simon, R. H Nov. 78
0	Costello, E. J Apr. 49	Herbster, E. J June 70	Marple, S. (Jr.) Mar. 69	Slater, W. L. Nov. 85
	Coulter, K. E Feb. 47 Craver, J. K Oct. 24	Herring, W. M June 94	Marshall, W. R. (Jr.)June 34	Smith, A. R Dec. 49
	Crosby, A. R Nov. 44	Honeycutt, E. M Aug. 88	Martel, E. H Mar. 77	Smith, D. E Nov. 48
	Crowley, M. S Jan. 88	Horvath, P. J June 88	Mathews, J. W June 84	Smith, D. T Feb. 51
-	Croysdale, L. G Jan. 72	Houghton, J. A Sept. 30	Matson, R. F Sept. 67	Sommers, H. A Mar. 94
	Cunningham, W. A. July 29	Hoyle, A. C Nov. 75	May, C. A Apr. 70	Sommer, N. B May 35
	Custer, R. S Sept. 86	Hughart, R. P May 78	Meadows, E. L May 93	Spitz, P. H Dec. 49
		Hughmark, G. A July 97	Michaux, J. P Mar. 77	Steigerwald, B. J. Sept. 49
	D	Huntley, H. W Nov. 72	Miller, W. M June 75 Minor, W. R July 55	Stuart, G. A. (Sr.) Jan. 139
	Dahlstrom, D. A June 39	Hyman, DJune 99	Moen, R. H Nov. 67	Sullivan, F. E May 85
	Dale, N. K Sept. 64		Morrow, W. E June 57	Sutphin, E. M Mar. 59
	David, W. H Aug. 28	1	Myers, J. E Dec. 69	Sylvander, N. E Sept. 25
	Davies, J. A Sept. 74	lannazzi, F. D May 110		Szymanski, W. A. Apr. 53
	Davis, R. A		N	
	Dean, R. D June 79	J	Nager, M Mar. 69	1
	De Cicco, R. W May 74	Jackson, R. E Jan. 83		Talbot, R. C Apr. 53
	Davidala M. I. July 21	300K3011, 11. L3011. 03	Nedwick, J. J June 70	
	Deutch, M. J July 31	Jebens, R. H Aug. 68	Neely, W. J Aug. 52	Taylor, J. G Feb. 100
ı	Devlin, T. J Mar. 35	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94	Neely, W. J Aug. 52 Newey, H. A Apr. 70	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101
	Devlin, T. J Mar. 35 Dille, R. M Nov. 85	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier,	Neely, W. J Aug. 52 Newey, H. A Apr. 70 Nichols, W. T June 30	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jan. 78
	Devlin, T. J Mar. 35 Dille, R. M Nov. 85 Dinsmore, R. P Apr. 38	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F Mar. 23	Neely, W. J Aug. 52 Newey, H. A Apr. 70 Nichols, W. T June 30 Niedzwiecki, J. L Aug. 79	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74
	Devlin, T. J Mar. 35 Dille, R. M Nov. 85	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F Mar. 23 Jones, C. F Apr. 39	Neely, W. J Aug. 52 Newey, H. A Apr. 70 Nichols, W. T June 30 Niedzwiecki, J. L . Aug. 79 Nisbet, W. R Aug. 19	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F Mar. 23 Jones, C. F Apr. 39 Jones, H. L	Neely, W. J Aug. 52 Newey, H. A Apr. 70 Nichols, W. T June 30 Niedzwiecki, J. L Aug. 79	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) . July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F Mar. 23 Jones, C. F Apr. 39	Neely, W. J Aug. 52 Newey, H. A Apr. 70 Nichols, W. T June 30 Niedzwiecki, J. L . Aug. 79 Nisbet, W. R Aug. 19	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F Mar. 23 Jones, C. F Apr. 39 Jones, H. L	Neely, W. J Aug. 52 Newey, H. A Apr. 70 Nichols, W. T June 30 Niedzwiecki, J. L Aug. 79 Nisbet, W. R Aug. 19 Norris, R. C May 96	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60
	Devlin, T. J Mar. 35 Dille, R. M Nov. 85 Dinsmore, R. P Apr. 38 Dykstra, D. I July 80 Aug. 68 E Eckert, H. K Aug. 24 Eckert, J. S Sept. 89	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F Mar. 23 Jones, C. F Apr. 39 Jones, H. L Apr. 65 Jordan, G. V. (Jr.) Oct. 64	Neely, W. J Aug. 52 Newey, H. A Apr. 70 Nichols, W. T June 30 Niedzwiecki, J. L Aug. 79 Nisbet, W. R Aug. 19 Norris, R. C May 96 O Ogle, F. T Oct. 87	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F Mar. 23 Jones, C. F Apr. 39 Jones, H. L Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R May 74	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F Mar. 23 Jones, C. F Apr. 39 Jones, H. L Apr. 65 Jordan, G. V. (Jr.) . Oct. 64 K Kaiser, H. R May 74 Kane, G. P June 107	Neely, W. J Aug. 52 Newey, H. A Apr. 70 Nichols, W. T June 30 Niedzwiecki, J. L Aug. 79 Nisbet, W. R Aug. 19 Norris, R. C May 96 O Ogle, F. T Oct. 87	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F Mar. 23 Jones, C. F Apr. 39 Jones, H. L Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R May 74	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F Mar. 23 Jones, C. F Apr. 39 Jones, H. L Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R May 74 Kane, G. P June 107 Karlovitz, B Aug. 56 Katz, D. L Jan. 91 Keller, K. H May 60	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May B8 Voci, J. J. May 110 W
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar., 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82	Jebens, R. H. Aug. 68 Jernigan, E. C. Nov. 94 Johanningsmeier, W. F. Mar. 23 Jones, C. F. Apr. 39 Jones, H. L. Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R. May 74 Kane, G. P. June 107 Karlovitz, B. Aug. 56 Katz, D. L. Jan. 91 Keller, K. H. May 60 Kennedy, J. R. May 46 Kennel, W. E. Oct. 20 Kerle, E. J. Apr. 75 Kimberlin, G. O. June 84 Kindschy, E. O. Mar. 69	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82	Jebens, R. H. Aug. 68 Jernigan, E. C. Nov. 94 Johanningsmeier, W. F. Mar. 23 Jones, C. F. Apr. 39 Jones, H. L. Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R. May 74 Kane, G. P. June 107 Karlovitz, B. Aug. 56 Katz, D. L. Jan. 91 Keller, K. H. May 60 Kennedy, J. R. May 46 Kenned, W. E. Oct. 20 Kerle, E. J. Apr. 75 Kimberlin, G. O. June 84 Kindschy, E. O. Mar. 69 Kirk, M. C. (Jr.) Mar. 64	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waever, T. Jan. 21
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 57 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. J. June 57	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. J. June 57	Jebens, R. H. Aug. 68 Jernigan, E. C. Nov. 94 Johanningsmeier, W. F. Mar. 23 Jones, C. F. Apr. 39 Jones, H. L. Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R. May 74 Kane, G. P. June 107 Karlovitz, B. Aug. 56 Katz, D. L. Jan. 91 Keller, K. H. May 60 Kennedy, J. R. May 46 Kennel, W. E. Oct. 20 Kerle, E. J. Apr. 75 Kimberlin, G. O. June 84 Kindschy, E. O. Mar. 69 King, W. R. Sept. 28 Kirk, M. C. (Jr.) Mar. 64 Klomparens, A. J. Jan. 83 Koeber, A. May 83 Kogiso, H. Dec. 41 Krisher, A. S. Apr. 98 Krum, J. L. Aug. 96 Kunkel, L. V. Sept. 70	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67 Wilde, D. J. Mar. 86
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. J. June 57 Garrison, H. R. Sept. 49 Gaska, R. A. Jan. 139	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67 Wilde, D. J. Mar. 86 Williams, R. L. Feb. 72
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. June 57 Garrison, H. R. Sept. 49 Gaska, R. A. Jan. 139 Gegner, P. J. Mar. 114	Jebens, R. H. Aug. 68 Jernigan, E. C. Nov. 94 Johanningsmeier, W. F. Mar. 23 Jones, C. F. Apr. 39 Jones, H. L. Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R. May 74 Kane, G. P. June 107 Karlovitz, B. Aug. 56 Katz, D. L. Jan. 91 Keller, K. H. May 60 Kennedy, J. R. May 46 Kennel, W. E. Oct. 20 Kerle, E. J. Apr. 75 Kimberlin, G. O. June 84 Kindschy, E. O. Mar. 69 King, W. R. Sept. 28 Kirk, M. C. (Jr.) Mar. 64 Klomparens, A. J. Jan. 83 Koeber, A. May 83 Kogiso, H. Dec. 41 Krisher, A. S. Apr. 98 Krum, J. L. Aug. 96 Kunkel, L. V. Sept. 70	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67 Wilde, D. J. Mar. 86
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. June 57 Garrison, H. R. Sept. 49 Gaska, R. A. Jan. 139 Gegner, P. J. Mar. 114 Gernand, M. O. June 62	Jebens, R. H Aug. 68 Jernigan, E. C Nov. 94 Johanningsmeier, W. F	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67 Wilde, D. J. Mar. 86 Williams, R. L. Feb. 72 Wood, L. E. Feb. 93 Wright, J. H. Nov. 68
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. J. June 57 Garrison, H. R. Sept. 49 Gaska, R. A. Jan. 139 Gegner, P. J. Mar. 114 Gernand, M. O. June 62 June 84	Jebens, R. H. Aug. 68 Jernigan, E. C. Nov. 94 Johanningsmeier, W. F. Mar. 23 Jones, C. F. Apr. 39 Jones, H. L. Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R. May 74 Kane, G. P. June 107 Karlovitz, B. Aug. 56 Katz, D. L. Jan. 91 Keller, K. H. May 60 Kennedy, J. R. May 46 Kennel, W. E. Oct. 26 Kerle, E. J. Apr. 75 Kimberlin, G. O. June 84 Kindschy, E. O. Mar. 69 King, W. R. Sept. 28 Kirk, M. C. (Jr.) Mar. 64 Klomparens, A. J. Jan. 83 Koeber, A. May 83 Kogiso, H. Dec. 41 Krisher, A. S. Apr. 98 Krum, J. L. Aug. 96 Kunkel, L. V. Sept. 70 L Laibe, J. W. Apr. 29 Landau, R. June 37 Landis, D. M. Oct. 58	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67 Wilde, D. J. Mar. 86 Williams, R. L. Feb. 72 Wood, L. E. Feb. 93
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. June 57 Garrison, H. R. Sept. 49 Gaska, R. A. Jan. 139 Gegner, P. J. Mar. 114 Gernand, M. O. June 62 June 84 Gessner, A. W. Feb. 68	Jebens, R. H. Aug. 68 Jernigan, E. C. Nov. 94 Johanningsmeier, W. F. Mar. 23 Jones, C. F. Apr. 39 Jones, H. L. Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R. May 74 Kane, G. P. June 107 Karlovitz, B. Aug. 56 Katz, D. L. Jan. 91 Keller, K. H. May 60 Kennedy, J. R. May 46 Kennel, W. E. Oct. 20 Kerle, E. J. Apr. 75 Kimberlin, G. O. June 84 Kindschy, E. O. Mar. 69 King, W. R. Sept. 28 Kirk, M. C. (Jr.) Mar. 64 Klomparens, A. J. Jan. 83 Koeber, A. May 83 Kogiso, H. Dec. 41 Krisher, A. S. Apr. 98 Krum, J. L. Aug. 96 Kunkel, L. V. Sept. 70 L Laibe, J. W. Apr. 29 Landau, R. June 37 Landis, D. M. Oct. 58 Landsberg, H. Apr. 26	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67 Wilde, D. J. Mar. 86 Williams, R. L. Feb. 72 Wood, L. E. Feb. 93 Wright, J. H. Nov. 68
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. June 57 Garrison, H. R. Sept. 49 Gaska, R. A. Jan. 139 Gegner, P. J. Mar. 114 Gernand, M. O. June 62 June 84 Gessner, A. W. Feb. 68 Gilmore, C. L. Aug. 32	Jebens, R. H. Aug. 68 Jernigan, E. C. Nov. 94 Johanningsmeier, W. F. Mar. 23 Jones, C. F. Apr. 39 Jones, H. L. Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R. May 74 Kane, G. P. June 107 Karlovitz, B. Aug. 56 Katz, D. L. Jan. 91 Keller, K. H. May 60 Kennedy, J. R. May 46 Kennel, W. E. Oct. 20 Kerle, E. J. Apr. 75 Kimberlin, G. O. June 84 Kindschy, E. O. Mar. 69 King, W. R. Sept. 28 Kirk, M. C. (Jr.) Mar. 64 Klomparens, A. J. Jan. 83 Koeber, A. May 83 Kogiso, H. Dec. 41 Krisher, A. S. Apr. 98 Krum, J. L. Aug. 96 Kunkel, L. V. Sept. 70 L Laibe, J. W. Apr. 29 Landau, R. June 37 Landis, D. M. Oct. 58 Landsberg, H. Apr. 26 Langston, B. G. Feb. 63	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67 Wilde, D. J. Mar. 86 Williams, R. L. Feb. 72 Wood, L. E. Feb. 93 Wright, J. H. Nov. 68
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. June 57 Garrison, H. R. Sept. 49 Gaska, R. A. Jan. 19 Gaska, R. A. Jan. 19 Gagner, P. J. Mar. 114 Gernand, M. O. June 62 June 84 Gessner, A. W. Feb. 68 Gilmore, C. L. Aug. 32 Gilmour, C. H. July 49	Jebens, R. H. Aug. 68 Jernigan, E. C. Nov. 94 Johanningsmeier, W. F. Mar. 23 Jones, C. F. Apr. 39 Jones, H. L. Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R. May 74 Kane, G. P. June 107 Karlovitz, B. Aug. 56 Katz, D. L. Jan. 91 Keller, K. H. May 60 Kennedy, J. R. May 46 Kennel, W. E. Oct. 20 Kerle, E. J. Apr. 75 Kimberlin, G. O. June 84 Kindschy, E. O. Mar. 69 King, W. R. Sept. 28 Kirk, M. C. (Jr.) Mar. 64 Klomparens, A. J. Jan. 83 Koeber, A. May 83 Kogiso, H. Dec. 41 Krisher, A. S. Apr. 98 Krum, J. L. Aug. 96 Kunkel, L. V. Sept. 70 L Laibe, J. W. Apr. 29 Landau, R. June 37 Landis, D. M. Oct. 58 Landsberg, H. Apr. 26 Langston, B. G. Feb. 63 Lea, N. S. Nov. 89	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67 Wilde, D. J. Mar. 86 Williams, R. L. Feb. 72 Wood, L. E. Feb. 93 Wright, J. H. Nov. 68
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. June 57 Garrison, H. R. Sept. 49 Gaska, R. A. Jan. 139 Gegner, P. J. Mar. 114 Gernand, M. O. June 62 June 84 Gessner, A. W. Feb. 68 Gilmore, C. L. Aug. 32	Jebens, R. H. Aug. 68 Jernigan, E. C. Nov. 94 Johanningsmeier, W. F. Mar. 23 Jones, C. F. Apr. 39 Jones, H. L. Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R. May 74 Kane, G. P. June 107 Karlovitz, B. Aug. 56 Katz, D. L. Jan. 91 Keller, K. H. May 60 Kennedy, J. R. May 46 Kennel, W. E. Oct. 20 Kerle, E. J. Apr. 75 Kimberlin, G. O. June 84 Kindschy, E. O. Mar. 69 King, W. R. Sept. 28 Kirk, M. C. (Jr.) Mar. 64 Klomparens, A. J. Jan. 83 Koeber, A. May 83 Kogiso, H. Dec. 41 Krisher, A. S. Apr. 98 Krum, J. L. Aug. 96 Kunkel, L. V. Sept. 70 L Laibe, J. W. Apr. 29 Landau, R. June 37 Landis, D. M. Oct. 58 Landsberg, H. Apr. 26 Langston, B. G. Feb. 63 Lea, N. S. Nov. 89 Leathers, J. M. July 27 Leibson, I. July 21	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67 Wilde, D. J. Mar. 86 Williams, R. L. Feb. 72 Wood, L. E. Feb. 93 Wright, J. H. Nov. 68 Y Young, E. C. Apr. 57 Young, E. C. Apr. 57 Young, E. C. Apr. 57
	Devlin, T. J. Mar. 35 Dille, R. M. Nov. 85 Dinsmore, R. P. Apr. 38 Dykstra, D. I. July 80 Aug. 68 E Eckert, H. K. Aug. 24 Eckert, J. S. Sept. 89 Edwards, E. F. Jan. 21 Ehlers, N. J. Dec. 20 Elliott, J. Aug. 52 Epstein, J. P. Nov. 111 Erickson, R. A. Mar. 53 Eschrich, J. July 106 Estep, J. W. Apr. 82 F Fitch, M. L. (Jr.) June 42 Funk, E. R. May 121 G Gagliardi, D. V. Feb. 44 Galstaun, L. S. Sept. 49 Gandsey, L. J. Oct. 93 Garmon, J. J. June 57 Garrison, H. R. Sept. 49 Gaska, R. A. Jan. 139 Gegner, P. J. Mar. 114 Gernand, M. O. June 62 June 84 Gessner, A. W. Feb. 68 Gilmore, C. L. Aug. 32 Gilmour, C. H. July 49 Githens, R. E. July 55	Jebens, R. H. Aug. 68 Jernigan, E. C. Nov. 94 Johanningsmeier, W. F. Mar. 23 Jones, C. F. Apr. 39 Jones, H. L. Apr. 65 Jordan, G. V. (Jr.) Oct. 64 K Kaiser, H. R. May 74 Kane, G. P. June 107 Karlovitz, B. Aug. 56 Katz, D. L. Jan. 91 Keller, K. H. May 60 Kennedy, J. R. May 46 Kennel, W. E. Oct. 20 Kerle, E. J. Apr. 75 Kimberlin, G. O. June 84 Kindschy, E. O. Mar. 69 King, W. R. Sept. 28 Kirk, M. C. (Jr.) Mar. 64 Klomparens, A. J. Jan. 83 Koeber, A. May 83 Koeber, A. May 83 Koeber, A. May 83 Koeber, A. J. Jan. 83 Koeber, A. May 83 Koeber, A. May 83 Koeber, A. Sept. 28 Kirk, M. C. (Jr.) Mar. 64 Klomparens, A. J. Jan. 83 Koeber, A. May 83 Koeber, A. May 83 Koeber, A. Sept. 70 L Laibe, J. W. Apr. 29 Landau, R. June 37 Landis, D. M. Oct. 58 Landsberg, H. Apr. 26 Langston, B. G. Feb. 63 Lea, N. S. Nov. 89 Leathers, J. M. July 27	Neely, W. J	Taylor, J. G. Feb. 100 Taylor, W. C. (Jr.) July 101 Tayyabkhan, M. T. Jar. 78 Teykl, I. F. Mar. 74 Todd, D. B. May 69 May 74 Tomsic, V. J. July 55 Townsend, R. Dec. 65 Tsuchiya, H. M. May 60 Tucker, N. B. June 25 Tugenhat, G. Apr. 23 V Viens, C. H. May 88 Voci, J. J. May 110 W Wagner, J. A. Jan. 72 Walsh, T. J. Sept. 76 Waterman, L. C. Oct. 51 Weaver, T. Jan. 21 Webb, G. B. Nov. 78 Webb, M. S. Oct. 83 Weber, A. W. May 49 Weisser, E. P. Apr. 86 Westbrook, G. T. Jan. 83 Wiewiorowski, T. K. Sept. 67 Wilde, D. J. Mar. 86 Williams, R. L. Feb. 72 Wood, L. E. Feb. 93 Wright, J. H. Nov. 68 Y Young, E. C. Apr. 57 Young, E. C. Apr. 57 Young, G. B. W. Dec. 37

